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CONSTRAINTS TO USE COMPUTERS AMONG AGRICULTURAL EXTENSION WORKERS IN RIYADH AND QASEEM REGIONS OF SAUDI ARABIA

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ABSTRACT

The research determined constraints that may limit the use of computers among agricultural extension staff members in the Riyadh and Qassim regions. The population of the study consisted of 169 agricultural extension staff members in the agricultural directorates. Eighty-six agricultural employees were from Riyadh and eighty-three were from Qassim. Data were collected by utilizing a questionnaire and analyzed by using SPSS. The significant differences were tested at the significance level (0.05). Results showed that 50% of respondents' skills in English were poor, about 67% of them obtained the agricultural diploma, 38% worked in agriculture from 10 to 20 years, and 35% worked in agriculture for more than 20 years. These results indicate that the majority of respondents are young, at the stage of intellectual maturity, and have the ability to use computers. Results showed that the major obstacles to the uses of computers were: the lack of computers, non-availability of computers at the work place, lack of incentives from management, the lack of knowledge on using the computers, lack of interest in learning computers, the difficulty of the English language, the lack of training programs, the weakness of the contents of the training programs, and the low level of trainers. The findings of the study suggests the need for introducing the educational programs for agricultural extension staff, their supervisors and managers to make them realized the importance of the role of computers in extension work; which will in-turn activate the role of computers. Building a good computers infrastructure and a network would improve the working of agricultural extension and elevate the performance of the staff members.

Key words: Computers, Extension work, In-service Training, Capacity Building.

INTRODUCTION

The use of computers in Saudi Arabia started about 3 decades ago. Saudi Arabia recognizes the importance of computers, and their role in promoting development in all sectors such as economic, health, education, and agriculture. The successive development plans in the Kingdom has confirmed, within the general objectives of the development, the need to focus on technology, including computer technology, and to harness computer technology for the benefit of developments services (Elhag, 1995).

Although much time has been passed, the computers are in use in the kingdom, still their users face a number of obstacles and they are not widely used due to several constraints. Al -Homile, (2004) conducted a study on the use of computers in the public sector in the Kingdom of Saudi Arabia to enlist the obstacles to the use of computers, and to find solutions to these obstacles. The study showed that there is a high benefit of the use of computers in government agencies. The benefit from computer increases, when the sizes of the departments of computer increase. The study also showed that about 68.75% of the workers believe that, the lack of continuous training for workers in the field of computers regarded as a major obstacle to government agencies in the use of computer. The departments of computer suffer significantly from financial constraints, and there are problems in communications infrastructure that prevent the optimal use of the computer.

Al-Abdulgader and Alangari (1990) identified and diagnosed the obstacles that prevent the absorption of information technology in the public sector in the Kingdom of Saudi Arabia. A number of reasons; poor information system, poor and not sufficient training programs, and in-adequate participation of beneficiaries in the development of application programs in computers, and a weak support from top management for information technology were narrated. And the adoption of formal and stiff administrative procedures to the degree, it impeded the agricultural workers to use computers. The managers have skepticism in the abilities of their subordinates to use information technology. In-fact the managers do not have the adequate knowledge on computers and they are too old to use computers. Similar results have been reported by many other workers (Shuaib, 1997; Al Harbi, 1999).

Computer has a major role in extension work, (Alfaifi, 2006); it seems necessary to identify the obstacles to the use of computers in agricultural extension. Al-Omari (1996) also recommended the use of the computers in the field studies and to identify the needs for the use of computers in government agencies. Computers play a vital role in elevating the effectiveness of education and extension work by providing multiple

ways in enhancing the educational process and accessing the information speedily (Wilkinson, 1980).

MATERIALS AND METHODS

This descriptive study aimed at reviewing and identifying some of the obstacles to the use of computers among agricultural workers in the departments of Agricultural Affairs in Riyadh and Qaseem. The population of research includes all the agricultural workers working in the departments of Agriculture and its branches in Riyadh and Qaseem. Some 169 workers were dealing with the farmers, 86 of them from Riyadh region and 83 from Qassim region (Ministry of Agriculture, 1999).

Data collection tools: A well-designed questionnaire was used for the collection of data. Before launching the actual study, necessary information was gathered by reviewing the previous research reports and visiting the departments including the department of agricultural extension and the department of administrative sciences, and computer department at the Ministry of Agriculture. The questionnaire Included questions to collect information on the personal characteristics of the workers such as age, educational level, occupation, and years of experience. It also included about 17 obstacles faced by the workers in using the using the computers. The responses were recorded on the basis of the degree of impediment, divided into three levels, namely: weak = 1, average = 2, large = 3

The questionnaire was designed with the help of the faculty members in the Department of Agricultural Extension and Rural Sociology, College of Food and Agricultural Sciences at the King Saud University, and a number of specialists in the field of computers. The questionnaire was pretested and validated by having response from a reasonable number of workers. The questionnaire was distributed among the agricultural workers in Riyadh with the assistance of the department of agricultural extension and its branch in the ministry of agriculture in the Riyadh area whereas in Qassim region with the assistance of the department of agriculture of the region of Qassim. After three months the questionnaires were received back.

Statistical Analysis: Data were tabulated and reviewed carefully and were subjected to the statistical analysis by using SPSS (Abu Sarya, 2004). The frequencies and percentages were used to determine the obstacles to using computers. The T-tests and F-tests were used to find out the differences between the respondents according to their personal characteristics, which represent independent variables, whereas the obstacles to uses of computers represent the dependent variables. The level of significance was determined at (0.05). When differences were found in the F- tests, Scheffe test was used to locate differences.

RESULTS AND DISCUSSION

Personal characteristics: Data in Table (1) show that most of the agricultural workers (50%) were in age of thirties. This indicates that most of the workers were young. They were at the stage of intellectual maturity, and are capable of using the computers. In addition, because of their age and their ability, they will readily accept the new modern technologies. The results also revealed that most of respondents (67%) hold a diploma of agriculture. The ability of the educated workers on using the computers can be enhanced when they are provided with the good training programs and financial resources are made available. Also it appears from the

Table 1. The personal characteristics of respondents

1. Age			2. Education		
Age	**No**	**%**	**Level of education**	**No**	**%**
less than 30 years	15	8.9	Agricultural Diploma	113	66.9
from 30 to less than 40	84	49.7	B.Sc in Agriculture	52	30.7
from 40 to less than 50	59	34.9	Over university	4	2.4
More than 50	11	.6			
3.Occupation			**4. Experience**		
Occupation	No	%	Experience	No	%
Agricultural Engineer	37	21,9	less than 10 years	38	22.5
Agricultural Research	16	9.5	From 10 to 20Y	64	37.9
Agricultural technician	115	68	Morthan 30Y	59	34.9
did not mention	1	0.6	did not mention	8	4.7
5. Provision of computers in work			**6. Method of Learning Computer**		
Do you have computer?	**No**	**%**	**Method of Learning**	**No**	**%**
Yes	85	50.3	Training programs	47	28
No	84	49.7	By doing	96	56.8

table that approximately 68% of the agricultural workers were technicians. About 38%, of the workers have worked in the field of agriculture for 10 years but less than 20 years.

For almost half of the workers (50%) computers were available at their workplaces. Almost 28% of the workers were enrolled in training programs like: data entry, word processing, maintenance, programming, and international license for computers (ICDL). Almost fifty-nine of workers had learned the computer by doing, and this is relatively good for their departments. It indicates their desire to further learn the computers and their applications. There were many obstacles to the use of computers in departments of agricultural extension in Riyadh and Qassim. These obstacles can be summarized as under:

Financial and administrative obstacles: As Table (2) reveals that the majority of workers agreed that the financial and management obstacles were one of the biggest and most prominent obstacles that hinder agriculture workers from using computer to perform jobs in extension. A large number of respondents (about 99%) view the lack of computers as the major obstacle. This class of respondents also included those facing difficulties on the availability of computers as used by the other colleagues. This sort of arrangement causes delays in the completion of official assignments.

Lack of management incentives is the other obstacle faced by most of the workers (97%). The possible reason could be that some departments do not encourage their staff to expose to the training courses, even when the departments have the sufficient financial resources. In addition, some of members of management feel it necessary that they should invest in the development of their employees. They do not allow the employees to improve their skills in computers through paid computers training programs. In some cases, they do not facilitate their training programs even when they are willing to pay from their own pockets. Lack of financial incentives was an obstacle to the using of computer for about 97% of the workers. Some of workers do not care about any incentives, such as increase in salary or giving rewards, when passing a training program. The results of the present study are in consistent with the findings of Osaimi, (2005).

Poor and weak financial support is viewed as a big obstacle by about 96% of workers. The importance of financial support for the development of any staff working in any sector cannot be under-estimated. With the provision of necessary financial resources, the departments would be able to provide computers, software, and could be helpful in establishing a good network that links employees and departments. In addition, it can provide training equipment for staff that will enable them to take full advantages of the computers. It is therefore, important that each department should make funds available for buying hardware, establishing network infrastructures and designing training programs for the development of the staff.

Table 2: Distribution of the workers, according to the constraints of the use of computers

Constraints	Degrees of constraint						Not constraint	
	Low		moderate		high			
	No	%	No	%	No	%	No	%
Lack of computers	21	12.4	43	25.4	103	60.9	2	1.3
Lack of administrative incentives	12	7.1	27	16	125	74	5	3
Lack of financial incentives	12	7.1	28	16.6	124	73.4	5	3
Weak financial support in the use of the computer	15	8.9	33	19.5	115	68	6	3.6
Lack of time	48	28.4	56	33.1	54	32	11	6.5
Poor communications infrastructure (network) necessary for the use of computers	30	17.8	35	20.7	92	54.4	12	7.1
Lack of interest of some officials, this technology	12	7.1	51	30.2	101	59.8	5	3
Computer Literacy	36	21.3	57	33.7	70	41.4	6	3.6
Lack of interest of workers in Computer	37	21.9	63	37.3	63	37.3	6	3.5
Poor English language	28	16.6	56	33.1	76	45	9	5.3
Lack of training programs in computer	15	8.9	19	11.2	132	78.1	3	1.8
Lack of trainers in computers	17	10	29	17.2	118	69.8	5	3
Farness of training places form job places	33	19.5	44	26	79	46.7	13	7.8
Farness of training places from my house	39	23.1	41	24.3	76	45	13	7.7
The establishment of training at inappropriate times	38	22.5	45	26.6	70	41.4	16	9.5
Poor content of training programs	30	17.8	44	26	77	45.6	18	10.6
Low level of trainers	37	21.9	50	29.6	57	33.7	25	14.8

The departments do not allocate time or constitute the schedule for the training and educational programs for the workers and the particular factor prevented workers to use of computers. About 93.5% workers would like to see the designated period for their trainings to upgrade their skills. Some 93% workers consider the weak communications infrastructure (network) as an important obstacle that prevents them from using the computers. The managers lack interest in the use of computers. Most of high officials are of older age and due to this age factor they lack interest in computer and they lack enthusiasm and interest in the development of work. In addition, due to their little knowledge in computers, and poor information on the potential benefits on the use of compute they do not want to learn about computers in old age. The arrogance, intransigence and lack of sense of importance of the developments in modern technologies, of the managers, will affect the activities of the department and this will in turn delay the work in the departments.

Learning and cultural obstacles: Table 2- shows the obstacles to the use of computers depend on the culture and method of learning. The low literacy level and lack of interest in computers were important obstacles that limit the use of computers. The computers have been introduced in the curriculum of the schools and universities in the recent years. Most of the workers, if not all, are exposed some education or training on the use of computers through their early stages of learning. Therefore, about 96% respondents considered computer literacy had a great impact on the use of computers. The data obtained in the study are in agreement with that realized by (Omari, 1996). The interest in leaning by the learner is an important factor and about 96% workers also agree that lack of interest in learning computers is an obstacle. The general culture of the employees, at the workplace could be an obstacle because if they do not recognize the importance of computer, they will be living in a world other than the world we live in. Today, all the issues of our life depend on the computers and others electronic devices.

About 95% of the workers are of the view that the low proficiency in English language also remains an obstacle to the use of computers. However many people have learned the computer and they are not fluent in English. It is interesting to note that the use of computers has also helped some people to learn English.

Training obstacles: About 98% workers do not find ample opportunities to upgrade the skills through training programs on the use of computers and consider this aspect as an obstacle to the use of computers (Table-2). Both the employees and agricultural Extension program have shown great interest in the use of the computers. It may be difficult for the workers to get into the training programs at the expense of the department for not having the budget designated for the training programs. However, it would important that t every employee should take some time off and spare some part of his income to learn the computers. The computer is important tool in accomplishing the tasks in the job, especially agricultural extension activities.

There is a severe shortage of trained instructors to teach the computers in the departments of Agricultural Affairs. About 97% of workers view this shortage as an obstacle to the use of computers. The training schools were far away from their work place.

One of the impediments to the training programs was that they were held at the inappropriate times. About 90.5% workers view the unsuitable timings as an obstacle to the training programs. Also the weakness of the contents of the training programs offered by both the Ministry of Agriculture or by private institutions, and the trainers were not well qualified and their technical skills, their low competences were seen as the obstacles to the training.

Table 3. Scheffe test for the location of differences between the mean scores of workers according to their experience

Obstacles	Age	mean	Std	F value	level of P	Location of differences
Lack of interest of some officials, in this technology	Less than10 Years	2.50	0.67	2.70	0.024	1 with 2 and 3
	From 10to less than 20Y	1.33	0.84			
	More than 200Y	1.92	0.61			
Computer Literacy	Less than10 Years	1.23	0.81	2.42	0.004	1 with 2 and 3
	From 10to less than 20Y	2.42	0.63			
	More than 200Y	2.69	0.91			
Lack of interest of workers in Computer	Less than10 Years	1.12	0.81	2.635	0.01	1with 2 and 3
	From 10to less than 20Y	1.75	0.64			
	More than 200Y	2.45	0.96			

Significance level at 0.05

The results indicated that the fundamental difference was located between the workers with experience of less than ten years and the workers with experience of more than ten years. The workers with less work experience at their jobs realized all these obstacles to the use of computers more than those having more experience than ten years. This may be due to the fact that the workers with less experience deal with computers extensively and they face this obstacle at a greater degree.

While summing up the findings of the study, it becomes clear that these agricultural workers are faced with many obstacles to the use of computers like: lack of financial resources and interest of management in computers. These sorts of obstacles to the use of computers lead to create a less favourable environment for the use of computers and their application in the offices. Some other factors responsible for the low use of computers include the lack of training, the lack of interest in learning computer and the lack of experts/ trainers on computers were also the among the major obstacles to the use of computers.

In the light of these findings, it is suggested to introduce an educational program for agricultural extension staff, their supervisors and managers to make them realized the importance of the role of computers in extension work. Such programs will revitalize and re-activate the role of computers in extension work.

Building a good infrastructure and a network for computers could improve activities of the extension workers and their activities in agricultural extension.

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